Architect: JAMES W. MINICK, Harrisburg, Pa.

PITTSBURGH
Glass Products

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PITTSBURGH PLATE GLASS COMPANY

PITTSBURGH

MAKES QUALITY GLASS PRODUCTS

164 pages of data in Sweet's Files give you complete information on Pittsburgh Glass Products. See listings below.

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SEE: Pittsburgh Corning Catalog on PC Glass Blocks in Section 7c, catalog 3.

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SEE: Pittsburgh Corning Catalog on PC Foamglas in Section 10b, catalog 5.

THE PITTSBURGH PLATE GLASS COMPANY is the largest manufacturer of flat glass products in the world. Included among Pittsburgh Glass Products are all the types commonly used for glazing and decoration, as well as many special glasses for special architectural purposes. This manufacturer, in more than half a century of glass making, has developed the most modern and efficient production methods and machinery, has integrated its facilities and operations so successfully that it has established an unusually high standard of quality in all Pittsburgh Glass Products. This consistently high quality explains the enviable reputation won by Pittsburgh Plate Glass Company in the building trades.

Pittsburgh Service Is Available for Consultation, Planning, and Installation

We maintain a special staff of architectural representatives, whose whole duty consists in rendering the architect every assistance possible in connection with the use of glass and paint. And our staff of store front experts is maintained to serve the architect in matters concerning the styling and installation of modern store fronts. We extend a cordial invitation to all architects to take advantage of these services at any time.

The PITTSBURGH DATA SHEET HANDBOOK

should be on every architect's desk. It contains important technical descriptions and installation data on all glass, metal and paint products distributed by Pittsburgh Plate Glass Company. As new information becomes available, loose leaf sheets are sent to you for insertion to keep the Handbook up-to-date.

The DESIGN OF THE MONTH is a popular "suggestion file" of new store front designs. Every month a full-color rendition and complete description of a specially designed store front is sent to a selected list of architects. The Design of the Month shows how Pittsburgh Plate Glass Company products can be used to create modern, sales-winning store fronts, and keeps you abreast of new glass-application techniques.

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS
PITTSBURGH PLATE GLASS COMPANY

General Offices
GRANT BUILDING • PITTSBURGH 19, PA.

POLISHED PLATE GLASS

The Aristocrat of the Transparent Flat Glass Family

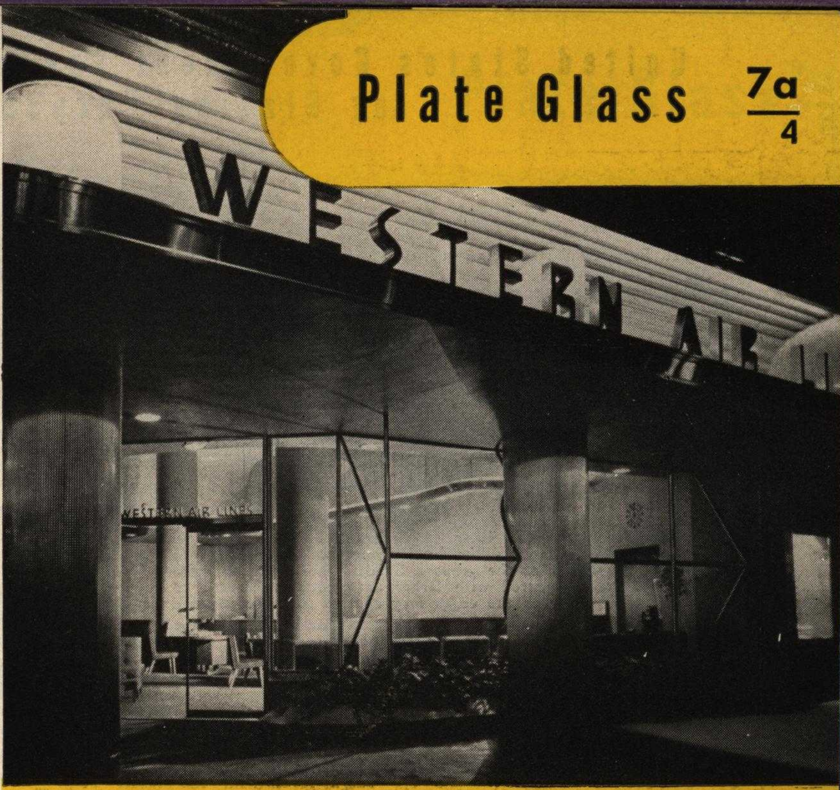
Polished Plate Glass is ground and polished, mechanically, to a commercially true, flat surface and a perfect brilliance and reflectivity of finish. It is the finest material available for exterior and interior glazing and should be used wherever clarity of vision, beauty and dignity are desired. Objects viewed through Polished Plate Glass, or reflected from it, are undistorted and perfectly natural in shape, form and outline. It imparts to buildings in which it is used a brilliance and luster, a distinction and charm, that enhances their appearance and adds immeasurably to their rental and sales value.

Vista Plate Glass for Use with Standard Sash

The ⅛ in. Polished Plate Glass manufactured by PITTSBURGH PLATE GLASS COMPANY is called Vista Plate Glass. It was developed to meet a specific need in the building industry . . . the need for a thin Plate Glass of top quality which could be used for general glazing, but which could be glazed in standard sash with standard sash weights, thus eliminating cost of special sash.

Increases Resale Value of Houses

Vista Plate Glass has the same beauty, luster, and clarity as standard ¼ in. Polished Plate Glass, and sufficient strength and durability to assure permanence. Any residence glazed with it has a greater resale value, which more than offsets the extra cost of Vista Plate over ordinary window glass.



THE DYNAMIC MODERNISM of large areas of Polished Plate Glass is fully illustrated in this striking and highly impressive application. Plate Glass lends beauty and dignity to any building in which it is used—commercial, industrial or residential. Architect: H. ROY KELLEY, Los Angeles, Calif. *(Above)*

PICTURE WINDOWS, large panels of Pittsburgh Polished Plate Glass, take advantage of a homesite's attractive environment. They not only afford unobstructed vision, but add tremendously to the appearance of the room. Architects: MITCHELL & RITCHEY, Pittsburgh, Pa. *(Below)*

MADE FROM
PITTSBURGH
PLATE GLASS

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.	STRENGTH	COLORS	FINISH
Silvering	⅛" (Vista Plate)	⅛" 72x123	⅛" 1.75 lbs.	Tension 6500 lbs. ["]	Clear	Ground and Polished
Mirror		13/64" 123x216	13/64" 2.67 lbs.	Compression 36,000 lbs. ["]		
Glazing	13/64"	¼" 160x220	¼" 3.29 lbs.	Modulus Elasticity		
Glazing	¼"	150x260		10,000,000 lbs. ["]		

United States Government Specifications for Plate Glass for Glazing Purposes; DD-G-451

CLASSIFICATION

Polished Plate Glass: silvering quality, glazing quality.

DEFINITIONS OF THE GENERAL CLASSES OF POLISHED PLATE GLASS

Plate Glass—Transparent, flat, relatively thin glass having plane polished surfaces and showing no distortion of vision when viewing objects through it at any angle.

Plate Glass is made at present by casting and rolling large sheets periodically or by rolling a continuous sheet. The sheets are then ground and polished.

DETAILED SPECIFICATIONS OF POLISHED PLATE GLASS

General Principles Involved in Grading Glass—All flat glass contains some imperfections and the principle employed in grading is to exclude all defects that would be objectionable in a given grade. This is difficult to do since there are no sharp lines of demarcation between grades, and experienced inspectors will differ in judgment as the quality of the glass approaches the limits of the grades. Small lights must be quite free from imperfections, as compared with larger ones, and the center of any sheet should be clear, whereas the edges may contain more pronounced defects.

Method of Examination—The method of examination is described in these specifications in order to make the results more uniform, and defines the condition under which glass should be examined because the distance from the glass, the angle between the glass and the line of sight, and the intensity of light all affect the visibility of imperfections.

These specifications should be interpreted by examining the glass in the following manner, with reference to the definitions of defects listed in the glossary:

The glass should be examined when placed in a position similar to that of a glazed light with the observer's eye on a level with the center of the sheet, and looking through the glass from a distance of about 36 in. into the light from a clear sky without any sun or any close background.

The visibility of waves, lines or cords depends chiefly upon the angle of observation, and the intensity of these defects can be classified on this basis. The values given for angles are the angles the line of sight makes with the sheet of glass when in a vertical position. Slight movement of the head horizontally through an angle of two or three degrees will make waves or lines more perceptible.

Acceptance or Rejection—Acceptance or rejection of a shipment or delivery shall be based on an examination of the following quantities:

For orders of 100 lights or less, all shall be examined; for orders of 101 to 500 lights, at least 50% shall be examined; for orders of 501 or more lights at least 25% shall be examined. Boxes shall be selected from the shipment at random.

If not more than 10% of the lights examined are below quality, the shipment shall be accepted provided the lights below the specified grade are not distinctly below the upper limits of the next lower grade.

If, however, an entire shipment of 500 lights or more is examined, not more than 5% may be below quality.

SPECIFICATIONS FOR POLISHED PLATE GLASS

Sizes and Thicknesses—The standard of thicknesses of plate glass shall be ⅛, 3/16, ¼, ⅜, ½, ⅝, ¾, ⅞, 1 and 1¼ in. Sheets are available ¼ in. thick in sizes having a maximum area of 250 sq. ft. Glass of ¼ in. thickness may be furnished having almost any desired dimension under the following maximums: 120x280 in., 144x260 in., 160x240 in.

Tolerance in Thicknesses—The maximum and minimum thicknesses allowed shall not be more than given thickness plus or minus one-half the difference between the standard thicknesses. The general variation in thickness should not be more than 1/32 in. for individual lights under 10 square feet in thicknesses up to ¼ in. The variation in lights over ¼ in. in thickness should not exceed one-half the total tolerance for that thickness.

Polished plate glass ¼, ⅛ and 3/16 in. thick is carried in stock in the larger cities.

Tolerance in Dimensions—Variation from dimensions ordered shall not be more than 1/32 in. per ⅛ in. thickness.

Grades—Plate glass shall be furnished for glazing purposes in one of two grades as specified. These grades will be known as silvering and glazing qualities.

Silvering quality is invariably used where the highest standard of glazing is required and imperfections are discoverable only on close inspection. This quality is rarely sold for glazing purposes in sizes over 20 sq. ft. Glazing quality represents the usual selection of plate glass supplied when quality is not otherwise definitely specified.

As allowable tolerances in quality must vary considerably with size of sheet required, different specifications will apply in each of the following four divisions according to size:

Division I. Sheets up to and including 10 sq. ft. in area.

Division II. Sheets having an area greater than 10 sq. ft. but not greater than 25 sq. ft.

Division III. Sheets having an area greater than 25 sq. ft. but not greater than 75 sq. ft.

Division IV. Sheets having an area greater than 75 sq. ft.

Division I. (Sizes Up to and Including 10 Sq. Ft.)—*Silvering Quality*—This glass shall not contain any major defects. The central area of this glass may contain only well scattered seeds. Ream, skim, short finish, and scratches which cannot be removed by buffing are not permissible. The edges may contain coarse seeds, but none shall be larger than 1/32 in. in diameter.

Glazing Quality—The central area of this quality may contain numerous scattered seed, including an occasional coarse seed, but no heavy seed. Small bubbles may occur on the edge. Stones, large bubbles, skim, ream, or long or heavy scratches are not permissible. Faint strings in the corners or upper edge of the light are permissible. The polish shall not show areas of short finish.

Division II. (Sizes from 10 Sq. Ft. to 25 Sq. Ft., Inclusive)—*Silvering Quality*—The central area of this quality may contain more numerous fine seed than the small sizes and an occasional coarse seed. The edges may contain occasional small bubbles and fine strings. No heavy defects or scratches which cannot be removed by buffing are permissible. The polish must be good and free from visible short finish.

Glazing Quality—The central area may contain small bubbles and fine strings or ream which do not give visible distortion when looking straight through the glass, but no long or heavy scratches. The edges may contain bubbles over 3/32 in., visible scratches shorter than 10 in., small areas of ream, strings, and small stones not larger than 1/32 in., but these defects should not be grouped nor interfere with the vision. The polish over the central area should be good, but patches of light, short finish may be present about the edges.

General—None of the above grades or sizes may contain any heavy or long lines, streaks of ream, any bubbles larger than ⅛ in., visibly poor polish, open bubbles, areas of skim, or stones over 1/32 in. in diameter.

Division III. (Sizes from 25 Sq. Ft. to 75 Sq. Ft.)—*Glazing Quality*—Lights of this size may contain numerous visible and larger imperfections not allowed in the smaller lights. But these must not be grouped or so prominent that they noticeably interfere with the vision. The central area of the plate shall be free from these larger defects.

The sheets may contain seed of any size, but not heavy seed except in relatively small patches on the outer border of the sheet, occasional bubbles up to ⅛ in. in the center and up to 3/16 in. on the borders, strings, ream and skim in very limited areas if not causing a deformation of objects viewed through the plate, occasional scratches and small stones under 1/16 in. Heavy ream, heavy cord, bubbles larger than 3/16 in. in diameter, stones larger than 1/16 in. in diameter, large fire cracks, areas of unpolished glass, easily visible poor polish, large open bubbles, or sand holes, are not permitted. The large defects should be confined to the upper edge and upper corners of the sheet, the lower and central areas to be relatively free from major defects.

Division IV. (Sizes Greater than 75 Sq. Ft.)—Sheets larger than 75 sq. ft. may contain defects of almost any kind except that they must not show large areas of heavy seed or bubbles nor have any defects which will cause spontaneous breakage, such as skim or large stones (⅛ in. in diameter) or show any areas of unpolished glass.

GLOSSARY OF TERMS USED IN THESE SPECIFICATIONS

The following terms shall be used in specifications:

Plate Glass—Seeds, short finish, skim, strings, scratches, bubbles, open bubbles, ream, stones, fire cracks, sand holes.

Bubbles—Gas inclusions in any rolled glass. These inclusions are practically always spherical and brilliant in appearance. The term applies to all such inclusions larger than 1/32 in. in diameter. The term small bubbles (commonly known as boil) refers to sizes between 1/32 in. and 3/32 in.

Seeds—Minute bubbles less than 1/32 in. in diameter. Fine seeds are visible only on close inspection, usually appearing as small specks and are an inherent defect in the best quality of plate glass. Seeds about 1/64 in. to 1/32 in. in diameter are usually considered as coarse seeds.

Open Bubbles—Bubbles which have been broken into by grinding, leaving a hemispherical hole in the glass surface.

Skim—Streaks of dense seed with accompanying small bubbles.

Strings—Wavy, transparent lines appearing as though a thread of glass had been incorporated into the sheet.

Cords—Heavy strings incorporated in the sheet, occurring without any regularity of direction, and appearing to be of considerable thickness rather than on the surface.

Ream—An area of unhomogeneous glass incorporated in the sheet producing a wavy appearance.

Scratches—Any marking or tearing of the surface appearing as though it had been done by either a sharp or rough instrument. Scratches occur on sheet glass in all degrees from various accidental causes.

Short Finish—Insufficient polish or lack of brilliancy; improperly finished surface which has the appearance of being slightly pitted and wavy when the surface is viewed in reflected light. These indentations, which are slight, have a polished rather than a ground surface, but the general effect is a slight dulling of the surface. Poor polish is usually caused by improper grinding.

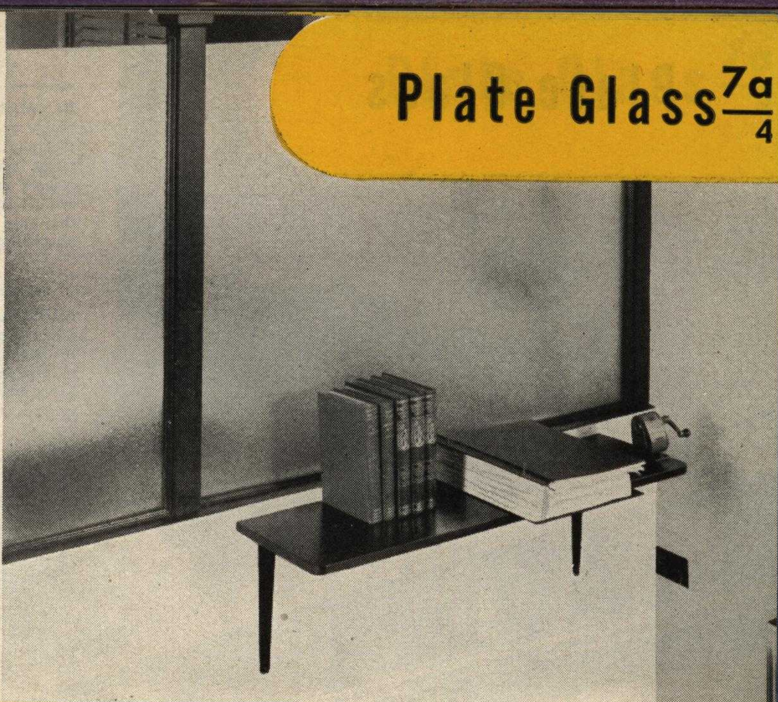
Stones—Any opaque or partially melted particle of rock, clay or batch ingredient imbedded in the glass.

Fire Cracks—Small cracks penetrating the surface of the sheet. Usually in the shape of short-hooked crescents. Caused by sudden heating or chilling of the surface.

Sand Holes—Rough spots on the polished surface produced during coarse grinding which fine grinding did not later remove; due, to some extent, to coarse grains of grinding sand becoming mixed with finer grades.

Central Area of Sheet—This term is used with slightly different interpretation with reference to plate or window glass. In plate glass the central area is considered to form an oval or circle centered on the sheet whose axes or diameters do not exceed 80% of the over-all dimension. This allows a fairly large area at the corners, which may have imperfections not allowed in the central area.

MIRRORS of Plate Glass are generously used throughout this cocktail lounge. They make the room seem more spacious and reflect gaiety and color.



LIGHT is transmitted, but the view is obstructed. Tapestry Glass is ideal for partitions in offices where light is needed and privacy is desired.

BLUE and FLESH TINTED PLATE GLASS

For Striking Decorative Effects

Flesh Tinted Plate Glass

Flesh Tinted Plate Glass is a medium becoming increasingly popular with architects to assist in obtaining decorative effects. The color is slight in surface section, considerably stronger in transverse section. Used in mirrors, Flesh Tinted Plate Glass produces reflections which minimize blues and violets and emphasize flesh colors, thus offering flattering images.

Blue Plate Glass

Blue Plate Glass, another popular product of the PITTSBURGH PLATE GLASS COMPANY, is a glass of rich blue color, ideal for decorative use in modern building. Like Flesh Tinted Plate Glass, this Blue Plate Glass is extraordinarily attractive when fabricated into mirrors.

Specific Uses

Flesh Tinted Mirrors or Blue Mirrors can be used with great success in home decoration to add color, warmth and sparkle to all types of rooms. They also are exceedingly ornamental in bars, stores, and public and commercial buildings of all sorts. Both types of Plate Glass also serve very well as unusual table tops, desk tops, book shelves, sill covers, etc.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.
Selected only	$\frac{13}{64}$"	123x216	2.67 lbs.

STRENGTH	COLORS	FINISH
Tension 6500 lbs. ["] Comp. 36,000 lbs. ["] Modulus Elasticity 10,000,000 lbs. ["]	Blue and Flesh	Ground and Polished

TAPESTRY GLASS

A Translucent, Semi-Opaque Glass

Tapestry Glass is a product ideally suited for use where the architect desires to glaze so as to admit the light but obstruct the view. Objects placed quite close to the surface of the glass can be seen through it almost as plainly as through transparent glass. But objects decrease in visibility and eventually become entirely shadowed and obscured when they are removed from close proximity to the glass.

Finish

It is furnished with both surfaces in Tapestry finish or one in Tapestry finish and the other polished, and it can be decorated by sand-blasting, chipping or mitering.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.
Glazing	$\frac{7}{32}$"	60x144	2.89 lbs.

STRENGTH	COLORS	FINISH
Equal to or greater than that of regular plate glass	Translucent Semi-Opaque	Plain $\frac{7}{32}$" Polished $\frac{7}{32}$"

X-RAY LEAD GLASS

The PITTSBURGH PLATE GLASS COMPANY now offers a domestic source of supply for X-ray Lead Glass which meets in every respect the requirements of various governmental departments. X-ray Lead Glass was developed primarily to protect operators and their assistants against continuous exposure to X-rays. While affording protection, the glass also allows clear vision of the X-ray apparatus and patient. X-ray Lead Glass may be used both for interior and exterior glazing.

Protection

Protection against very high X-ray intensities may be secured by the lamination of several lights. The single thickness gives protection against X-ray tubes operating under an impressed voltage of 100 k.w.

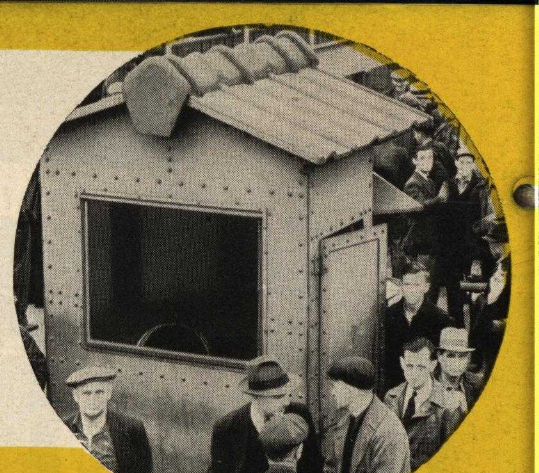
Lead Coefficient

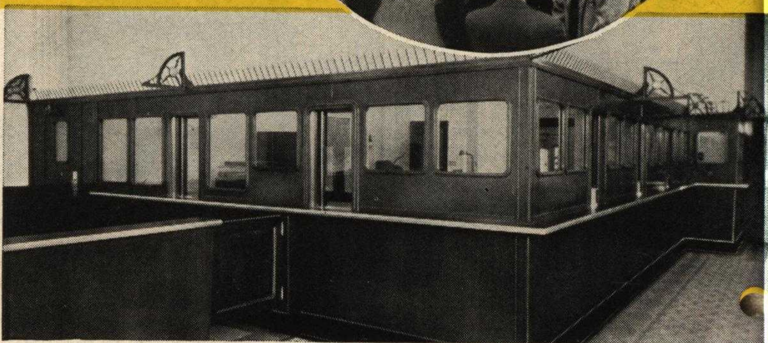
The actual glass thickness multiplied by the "lead coefficient" gives the equivalent sheet lead thickness. The "lead coefficient" of Pittsburgh X-ray Lead Glass is at least .30.

Plate Glass

← **IN MANY** types of buildings, where protection from the heat of the sun is needed, Solex Plate Glass can be used to advantage. Rooms exposed to direct sunlight are 10 to 20 degrees cooler when they are glazed with this heat-absorbing glass. (*Left*)

MULTIPLATE Bullet-resisting Plate Glass is specially designed for use in banks, gate houses, industrial plants, and other buildings where protection against firearms is required. (*Right, below*)





SOLEX HEAT-ABSORBING PLATE GLASS

Solex is made by a special process which gives it the valuable quality of absorbing heat without interfering with the transmission of visible light. Thus while it transmits 70% to 75% of the sun's total light, it admits less than 45% of the sun's total heat as compared with clear Plate Glass which admits nearly 90% of the sun's total light and heat.

Greatly Reduces Sunheat in Rooms

When windows, skylights, etc., of a building are glazed with Solex, the solar heat entering that building through such openings is greatly reduced. Persons sitting adjacent to Solex windows are far more comfortable, and the glare resulting from high light intensity is considerably lessened.

Specific Uses

Solex is well fitted for a wide variety of uses. Solex is widely used for the glazing of airport control towers. It may be employed to advantage in southern and western exposures of all types of buildings, whether schools, residences, factories, hotels or office buildings, and will result when so used in greater bodily and visual comfort for building occupants.

In the fabrication of mirrors, Solex has a high decorative value, because of its attractive aquamarine color.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.
Glazing only	1/8" 1/4" 3/8"	1/8" 123x216 1/4" 123x216 3/8" 72x130	1/8"—1.75 lbs. 1/4"—3.29 lbs. 3/8"—4.93 lbs.

STRENGTH	COLORS	FINISH
Tension 6500 lbs. ["] Comp. 36,000 lbs. ["] Modulus Elasticity 10,000,000 lbs. ["]	Bluish Green	Ground and Polished

MULTIPLATE BULLET-RESISTING PLATE GLASS

A laminted Safety Plate Glass developed by the Pittsburgh Plate Glass Company for use where special protection, usually protection against firearms, is required.

Protective Qualities of Various Thicknesses

1⅛-in. Multiplate, called Super Multiplate and the thickness most commonly used, is satisfactory for use against weapons developing not more than 490 ft. lbs. energy. It will withstand from four to ten shots fired at point blank range from the common sidearms. 1½-in. Multiplate, called Hi-Resist Multiplate, is satisfactory for use against weapons developing not more than 804 ft. lbs. energy. It is especially designed to offer protection against the revolver popularly called the Smith and Wesson Magnum Revolver, shooting a special .357 Magnum cartridge. 2-in. Multiplate, called Hi-Power Multiplate, is satisfactory for use against weapons developing not more than 2400 ft. lbs. energy. It is the only glass officially listed for protection against high-powered rifle bullets. It will withstand successfully several shots from a standard 30-30 sheriff's weapon, and will even turn back a single steel jacketed service bullet shot from the terrifically powerful 30-06 Army Springfield. It also is recommended as adequate protection against a burst of fire from the Thompson Sub-Machine Gun.

Practically all banks in the United States using bullet-resisting glass standardize on Multiplate. It is regularly checked, tested, and listed by Underwriters' Laboratories.

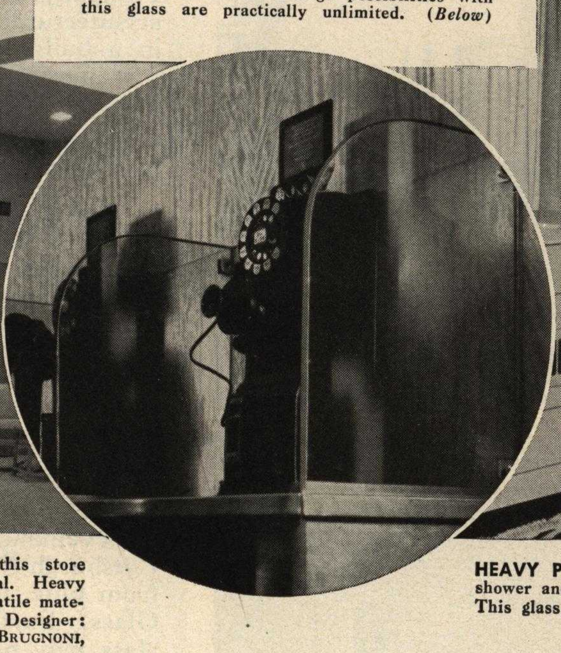
Physical Characteristics

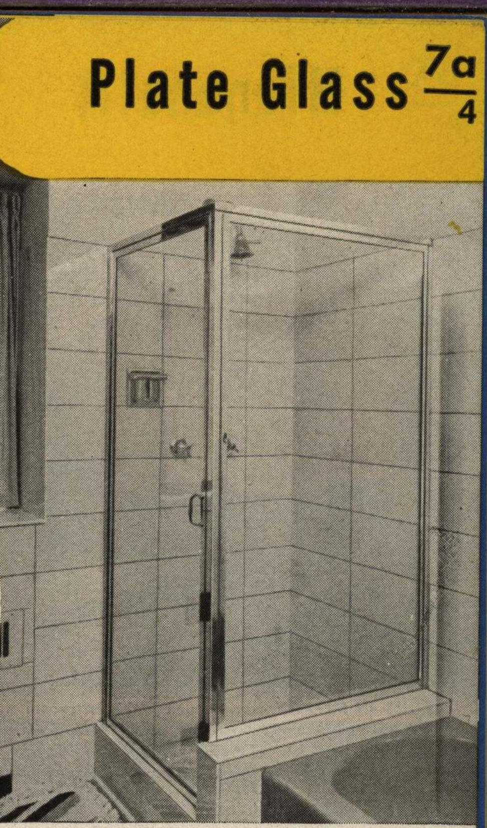
QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.
Commercial	½" Minimum	45x84	½" 6.91 lbs.
	¾" Minimum		¾" 10.30 lbs.
	⅞" Minimum		⅞" 11.90 lbs.
	1" Minimum		1" 13.57 lbs.
	Super 1⅛" Minimum		1⅛" 15.23 lbs.
	Hi-Resist 1½" Minimum		1½" 21.70 lbs.
	Hi-Power 2" Minimum		2" 27.11 lbs.

STRENGTH	COLORS	FINISH
For recommendations of protection against various firearms, see above	Clear	Ground and Polished Plate Glass laminated

PLATE GLASS accordion-type partition gives this store interior great charm and up-to-the-minute appeal. Heavy Plate Glass is one of the most striking and versatile materials for use in modern design and decoration. Designer: T. H. Robsjohn-Gibbings—Architect: Rene Brugnoni, New York, N. Y.

ONE OF THE MANY uses to which Heavy Plate Glass is well-suited. Design possibilities with this glass are practically unlimited. (*Below*)





HEAVY PLATE GLASS, with a glass door, encloses this shower and does away with the need for a shower curtain. This glass adds sparkle and beauty to a bathroom.

Heavy Plate Glass

A Practical Decorative Medium for a Hundred Uses

Heavy Plate Glass is a material that the architect will find particularly helpful in modern design and decoration. Only the architect's imagination limits the possibilities for the effective use of this striking and diffusing material.

Clear, Brilliant, Impervious, Strong

It is clear and affords excellent vision. It has brilliant and mirror-like smoothness of surface which only fine Plate Glass can offer. It is impervious to moisture, weather, cleaning chemicals, pencil marks and other disfiguring agents. It is easily cleaned. And above all, while possessing the strength that protects and endures, it also lends to the furniture or fixtures in which it is the dominant material a beauty, dignity and modern touch which perhaps no other medium can offer.

Specific Uses

A few of the uses in which Heavy Plate Glass has proved eminently successful are: Book Shelves, Decorative Panels and Partitions, Shower Bath Enclosures, Bank Fixtures (Deal Plates), Glass Roofs, Glass Flooring, Porte Cochere Roofs, Skylights, Semi-enclosed Telephone Booths, Theater Marquees, Valances, Lighting Fixtures, Radio Acoustic Chambers, Refrigerator Doors, Show Cases, Soda Fountain Counters, Aquariums, Aquatic Tanks, Bulkheads, Counter Tops, Table Tops, Modernistic Furniture, Shelves and Mausoleums.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.
Commercial Selected	⅜″ ½″ ⅝″ ¾″ ⅞″ 1″ 1¼″	⅜″ to ½″ 72x160 ⅝″ to ¾″ 72x130 ⅞″ to 1¼″ 70x130	⅜″ 4.93 lbs. ½″ 6.58 lbs. ⅝″ 8.22 lbs. ¾″ 9.67 lbs. ⅞″ 11.52 lbs. 1″ 13.16 lbs. 1¼″ 16.45 lbs.

STRENGTH	COLORS	FINISH
In direct proportion to the square of the thickness	Clear	Ground and Polished

PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Mirrors

For Every Structural and Decorative Purpose

Pittsburgh Mirrors include mirrors for every architectural need. Whether used structurally in a building, or as purely decorative media, Pittsburgh Mirrors are consistently of high quality and afford superior reflectivity.

Colors and Types Available

In line with the recent trend toward the wider use of mirrors, both structural and framed, and the increasingly important part played by mirrors in design and decoration, the PITTSBURGH PLATE GLASS COMPANY has developed a wider selection of glass colors and mirror backings than ever before. Consequently, the architect and designer can today create new and interesting effects with mirrors.

All Pittsburgh Mirrors are available made from regular Polished Plate Glass. But for the achievement of striking and unusual effects, Pittsburgh Mirrors may also be obtained made from blue, flesh tinted or green (Solex) Plate Glass. Furthermore, these various colors of glass may be treated to additional tone mutations by the backing used in fabricating them into mirrors. The regular silver backing is, of course, available, and in addition, a beautiful gold backing, and a smart gunmetal backing.

PITTSBURGH COPPER BACK MIRRORS

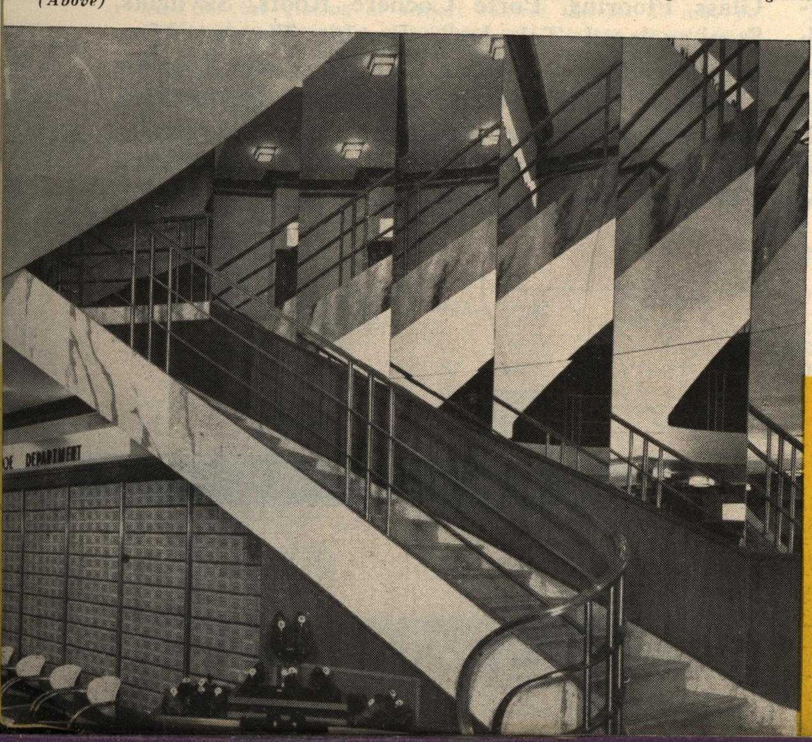
Pittsburgh Copper Back Mirrors receive, during manufacture, a coating of copper, electroplated over a heavy film of silver . . . and this copper backing forms an efficient protection against the usual effects of varying climatic and atmospheric conditions. Since these specially protected mirrors retain their beauty and usefulness year after year, their use practically eliminates the need for replacements.

Pittsburgh Copper Back Structural Mirrors

These mirrors are specially fabricated for use with mastic, in order to give maximum service. Structural mirrors differ from other types in that they have an additional protective coating.

BUILT-IN MIRROR, like the one in this bathroom, adds beauty and smartness. It gives the appearance of spaciousness and luxuriousness. Pittsburgh Mirrors are copper-backed to protect them against the effect of moisture. Architect: MAXWELL A. NORCROSS, Cleveland, O. *(Above)*

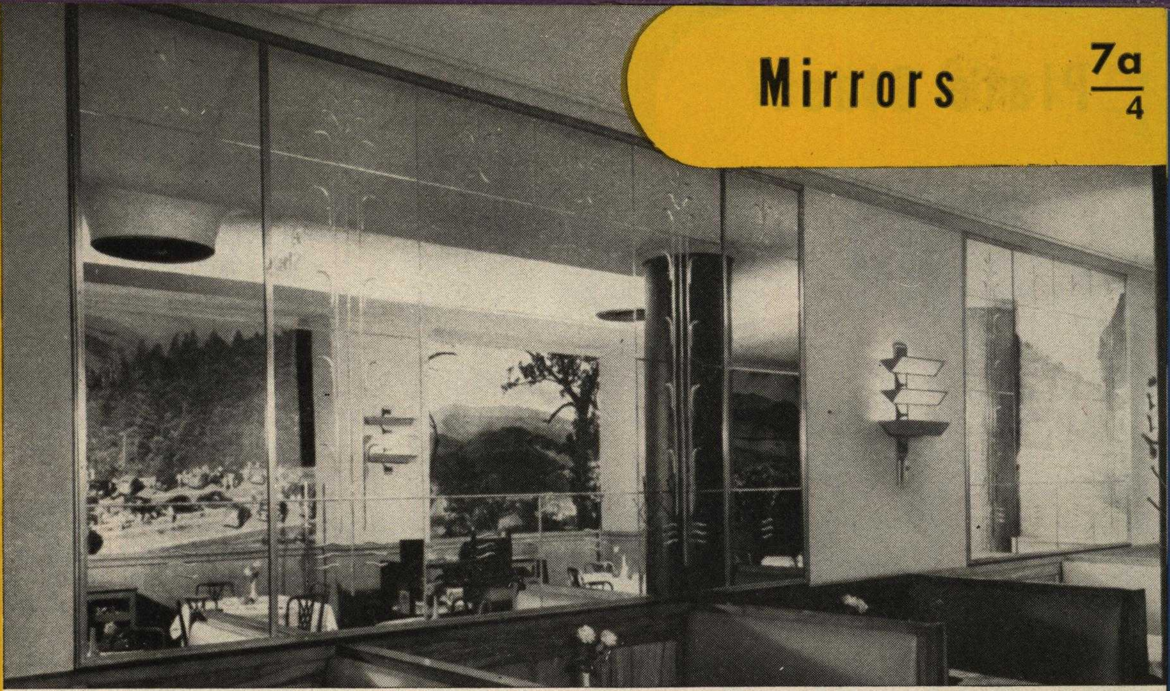
A STRUCTURAL wall mirror above and around a fireplace is a treat to the decor of any room. It reflects color, light, and movement—makes the room seem larger and brighter. *(Above)*



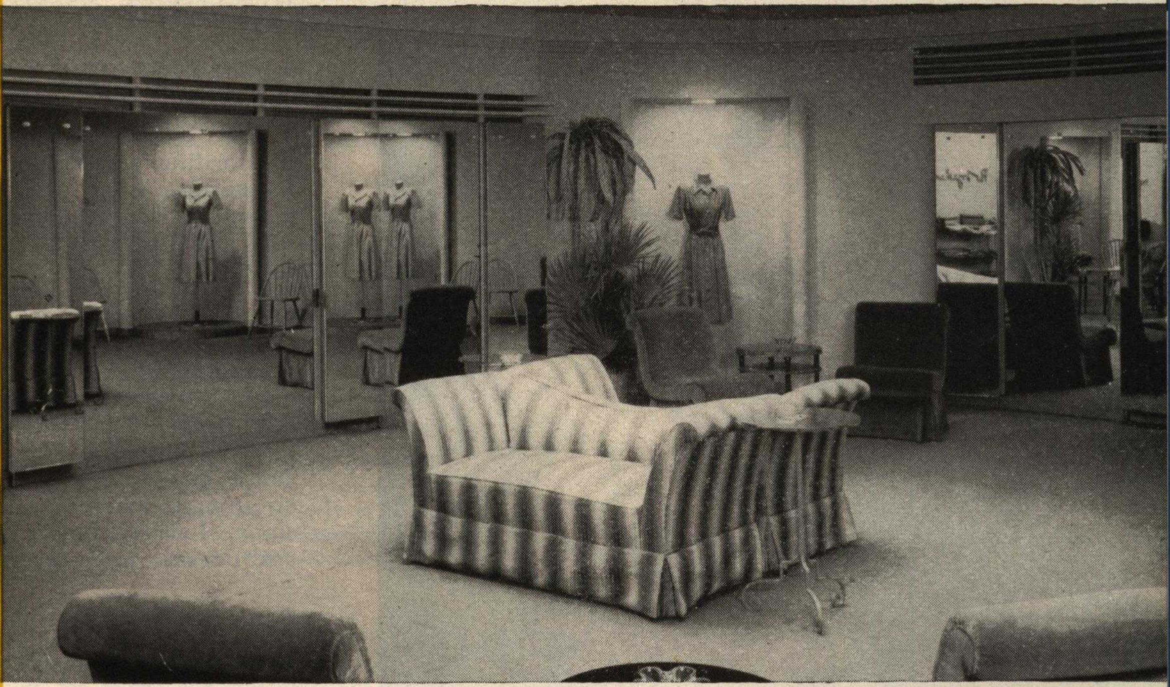
MADE FROM PITTSBURGH PLATE GLASS

←
LARGE MIRRORED WALL PANELS heighten and brighten this staircase. They serve to increase the apparent size and reflect both customers and merchandise in this store. Architect: ELIAS-ROTHSCHILD, New York, N. Y. *(Left)*

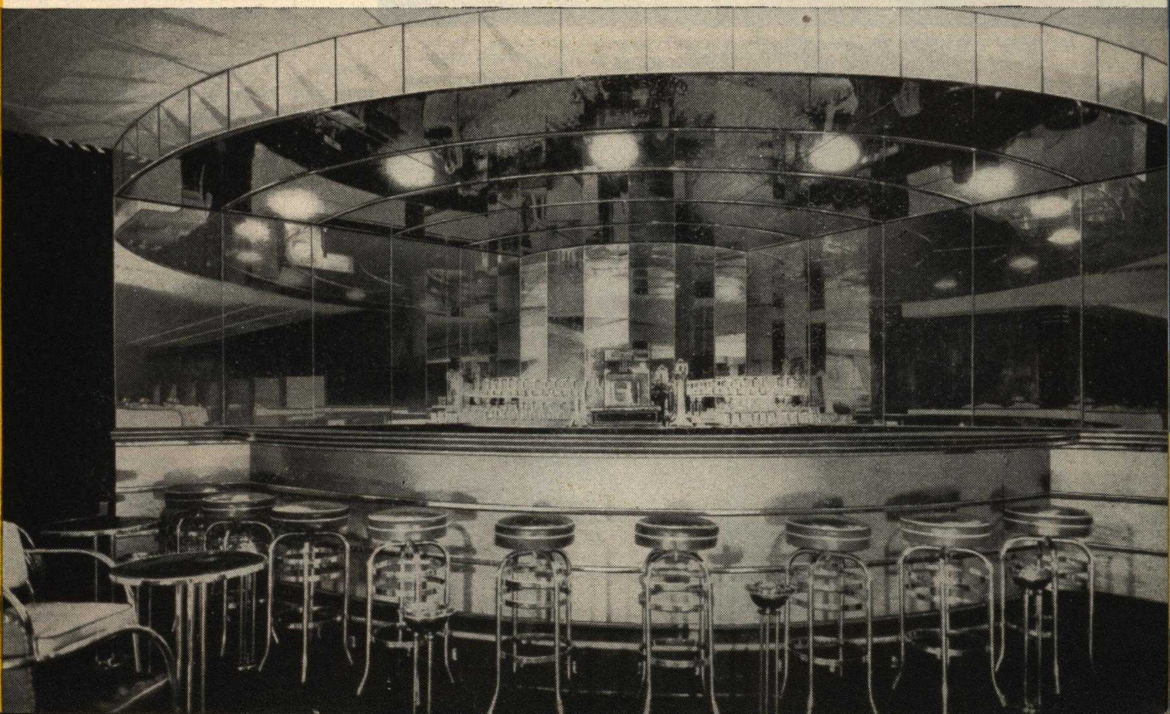
STRUCTURAL MIRRORS, made with Pittsburgh Polished Plate Glass, add brightness, smart appearance and lively reflections to commercial interiors—whatever their size or style. Such mirror applications, as this one in the coffee shop of a southern hotel, aid greatly in achieving an atmosphere of distinction. Designed by LYMAN W. CLEVELAND, Philadelphia, Pa.

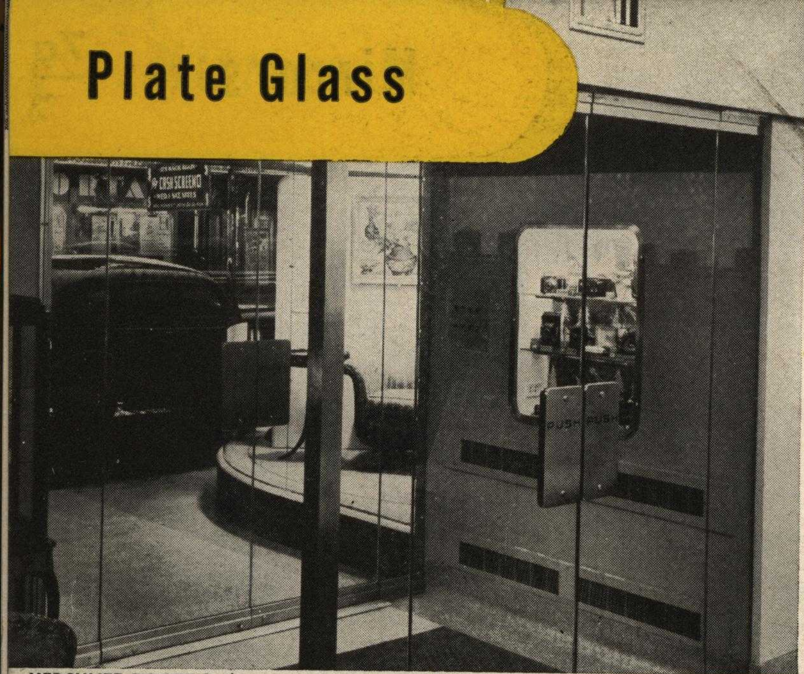


WHATEVER THE SIZE of a commercial interior, Pittsburgh Mirrors can make it smarter and more striking. Here, skillfully designed triplicate mirrors not only function as a practical merchandising aid, but also add charm and the illusion of greater size.



GAIETY, color and life are given to this bar in a San Diego restaurant by the generous use of mirrors. The attractiveness of this bar serves as a magnet to attract trade.





HERCULITE DOORS invite customers to enter. They make the interior of a shop part of the display—allow passers-by to see what the shop has to offer. *(Above)*

SMART, MODERN BALUSTRADE, created by Herculite Tempered Plate Glass panels, is a recent and effective architectural idea. Four times as strong as regular Plate Glass of equal thickness, it can withstand plenty of hard knocks in service. Architects: Holabird & Root, Chicago, Ill. *(Above)*

Herculite Plate Glass

A Tempered Plate Glass of Great Strength and Shock Resistance

Herculite is Polished Plate Glass which has been specially processed by heat and chilling. It will support a weight four times as great as ordinary Plate Glass. It will bend four times as far without breaking. Its resistance to impact is 7 to 8 times greater.

Unaffected by Varying Surface Temperatures

Herculite is not affected by varying surface temperatures, being able to stand, without breaking, a temperature of 650 degrees F. on one surface, while the other is at ordinary atmospheric temperature. It resists shocks and impacts as well at 15 degrees below zero F. as at ordinary temperatures.

Shattering Qualities

When Herculite, under terrific impact, *does* shatter, it does not break into sharp fragments like ordinary glass, but disintegrates into innumerable small fragments which are comparatively blunt edged.

Specific Uses

Obviously, the uses of Herculite are almost limitless where strength and safety are important considerations. It proves extraordinarily satisfactory when used for aquariums, cell doors, deck lights, doors, fire screens, flooring, gas cooker doors, glass bottom boats, gauge guards, kitchen equipment, laboratory equipment, partitions, portlights, road traffic signs, shelves, show cases, sight glasses, table and dresser tops, underwater lighting, etc.

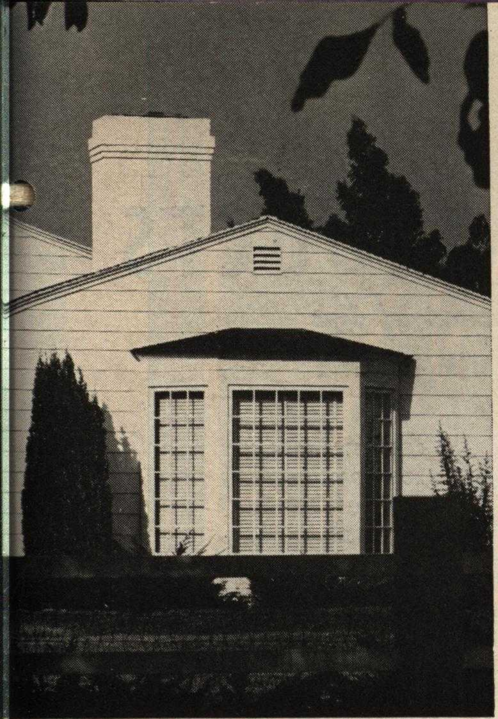
Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS
Same as glass before tempering	Same as glass before tempering	72x108	Same as glass before tempering

STRENGTH	COLORS	FINISH
Approximately 4 times that of glass of equal thickness which has not been tempered	Same as glass before tempering	Same as glass before tempering

←

STURDINESS, STRENGTH AND ENDURANCE are outstanding characteristics of Transparent Herculite Doors, providing the brilliant, handsome appearance of Plate Glass. Designed by Darveed, Inc., New York, N. Y. *(Left)*



LARGE BUILDINGS OR MODEST HOMES—the fine finish and good visional qualities of Pennvernon Window Glass always assure high quality windows.

PLENTY OF DAYLIGHT is important in schools and office buildings. Pennvernon Window Glass in this junior high school provides windows of good, clear vision, of highly reflective beauty giving them plenty of daylight. Architects: OVERSTREET AND TOWN, Jackson, Miss.

Pennvernon Window Glass

A Quality Sheet Glass for General Glazing Purposes

Pennvernon Window Glass represents an extraordinarily high development in sheet glass making. This glass is manufactured by a special process, in which it is drawn vertically and held absolutely flat from molten metal to finished sheet. During the drawing process, no rolls or foreign substances of any kind touch the surface of the glass until it has cooled sufficiently to be beyond injury. Consequently, Pennvernon has an unusually brilliant, reflective and unmarred surface finish on both sides of the sheet.

Advantages

Other superior qualities distinguish this fine window glass, too. Because it is made only from the purest and most carefully selected ingredients, it is remarkably transparent and retains its clarity indefinitely.

Pennvernon's durability also recommends it. Because the texture of its surfaces is so smooth, wear and abrasion affect it less than ordinary window glass, and its beauty and utility last longer. Because of these qualities, architects everywhere find Pennvernon Window Glass the most satisfactory sheet glass to specify.

Qualities

Pennvernon is graded at the factory by experts, in accordance with U. S. Government standards, and a label indicating quality is affixed to each light, as follows:

AA—This is the best quality of window glass obtainable. Because Pennvernon "AA" is higher in quality than is commercially necessary, it is made only on special order and priced accordingly.

A—The highest grade of window glass for commerical uses. Contains no imperfections that can perceptibly interfere with straight vision.

B—Window glass free from noticeable defects, but containing imperfections which prohibit its being graded as "A" quality.

Greenhouse—A special quality selected to eliminate defects injurious to growing plants. Available in sizes 16x18 in., 16x24 in. and 18x20 in. only.

Heavy Sheet Glass—Available in thicknesses of 3/16 in. and 7/32 in. and in AA, A, and B qualities. It is generally specified where weight and strength are required.

Picture Glass—Pennvernon Picture Glass, about 14 oz. in thickness, is a thin glass especially made and graded for picture framing.

Packing

Pennvernon Window Glass is packed with a sheet of special type separator paper between each light to prevent scratching, marring or staining. Lights are then placed in a specially constructed corrugated carton, which is safe and convenient to handle. This carton is inserted for shipment in a sturdy, lightweight wood crate, upon which the Pennvernon trade-mark always appears for easy identification.

Physical Characteristics

QUALITIES	THICKNESSES	MAX. SIZES	WEIGHTS PER SQ. FT.	STRENGTH	COLORS	FINISH
AA-A-B Greenhouse	Picture .062 - .070 Single Strength .087 - .095 Double Strength .118 - .133 Heavy Sheet 3/16" - .187 to .200 7/32" - .212 to .225	Heavy Sheet 3/16" up to 50 sq. ft. 7/32" up to 60 sq. ft.	Picture 13-14 oz. S.S. 19 oz. D.S. 26 oz. 3/16" 40 oz. 7/32" 45 oz.	Same as plate glass of equal thickness	Clear	Fire-finished

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